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USSN: 10/693,263

Art Unit: 3682; Examiner: Terence Boes

Amendment

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**CLAIM AMENDMENTS**

- 1 Claim 1 (currently amended): A rotatable control rod mechanism, comprising:  
2 (a) a rod having a spiral thread configuration;  
3 (b) a cylindrical spiral thread follower mounted on the rod for rotating the  
4 rod in opposite directions when the spiral thread follower is translated along the rod in  
5 opposite directions and gripped externally to prevent rotation thereof;  
6 (c) a handle including a longitudinal cylindrical bore therethrough receiving the  
7 cylindrical spiral thread follower and rotatably mounting the handle mounted over the spiral thread  
8 follower, the handle and the spiral thread follower having mating surfaces configured such that the  
9 handle rotates freely about the spiral thread follower, the handle adapted for being gripped  
10 externally and moved in opposite directions along the rod with the spiral thread follower, thereby  
11 allowing the spiral thread follower to be rotated in opposite directions by the rod when the handle  
12 and spiral thread follower are translated together along the rod and the spiral thread follower is not  
13 gripped; and  
14 (d) the spiral thread follower further comprising a section which is exposed relative  
to the handle to allow selectively gripping the spiral thread follower to selectively prevent rotation  
thereof when the handle and the spiral thread follower are translated together along the rod.
- 1 Claim 2 (currently amended): A rotatable control rod mechanism, comprising:  
2 (a) a rotatable load;  
3 (b) a rod having a spiral thread configuration ;  
4 (c) a connector connecting the rod to the load for rotating the load and rod  
5 together;  
6 (d) a cylindrical spiral thread follower mounted on the rod for rotating along  
7 the rod in opposite directions following the spiral thread configuration, the spiral thread  
8 follower having a collar ~~for receiving application of an external force applied to the collar~~  
9 ~~to prevent rotation of the spiral thread follower; and~~  
10 (e) a handle including a cylindrical bore therethrough, the handle rotatably  
11 mounting the cylindrical spiral thread follower in the cylindrical bore thereof and mounted  
12 over and rotatably captured to the spiral thread follower such that the handle and the spiral  
13 thread follower move together when one is moved along the rod and the handle and the  
14 spiral thread follower having mating surfaces configured such that the spiral thread

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15 ~~follower freely rotates around the handle in the absence of said external force, the handle~~  
16 ~~being proximate to and exposing the collar to application of said external force,~~  
17 ~~whereby applying said an external force against the collar of the spiral thread~~  
18 ~~follower while moving the handle and spiral thread follower together in opposite directions~~  
19 ~~along the rod rotates the rod and the load in opposite directions without rotating the spiral~~  
20 ~~thread follower, and the absence of said external force while moving the handle and spiral~~  
21 ~~thread follower together in opposite directions along the rod allows the rod to rotate the~~  
22 ~~spiral thread follower in opposite directions.~~

1 Claim 3 (currently amended): A plural stroke control rod mechanism, comprising:  
2 (a) a rotatable shaft;  
3 (b) a rod having spiral convolutions;  
4 (c) a connector connecting the rod to the shaft for rotating the shaft and rod  
5 together; and  
6 (d) a handle device, comprising:  
7 (1) a stepped cylinder comprising a first upper section or collar and a  
8 second lower section or cylindrical tube having a bottom end; the outer diameter of the  
9 collar being of large dimension relative to the outer diameter of the tube; and the stepped  
10 cylinder having a longitudinal axis and having an internal axially-extending bore mounting  
11 the stepped cylinder along the rod for rotation along the spiral convolutions of the rod;  
12 (2) a handle comprising a member having upper and lower ends, a  
13 longitudinal axis and an axial cylindrical bore therein extending to the upper and lower  
14 ends thereof, the member rotatably mounting the cylindrical tube of the stepped cylinder  
15 therein in the bore thereof with the relatively large diameter collar protruding from and  
16 rotatably seated along the upper end of the member, ~~and the tube and the handle member~~  
17 ~~having mating surfaces configured such that the tube and the stepped cylinder rotate freely~~  
18 ~~within the handle; and~~  
19 (3) the member and the collar comprising surfaces for gripping the  
20 member to move the handle device bidirectionally along the spiral rod and for gripping the  
21 collar to selectively prevent rotation of the collar, thereby selectively preventing rotation of  
22 the stepped cylinder and thereby selectively forcing rotation of the spiral rod during such  
23 bidirectional movement.

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1 Claim 4 (withdrawn): A method for reversibly and repeatedly rotating a rod having a spiral  
2 thread configuration, a thread follower mounted on the rod and a handle rotatably mounted  
3 over the spiral thread follower exposing a section of the spiral thread follower, the method  
4 comprising: first, engaging the exposed section to prevent rotation of the section and the  
5 spiral thread follower and translating the spiral thread follower along the rod in a first or a  
6 second direction of translation and thereby rotating the rod in a first or a second direction  
7 of rotation, respectively; and, second, engaging the handle to prevent rotation thereof while  
8 allowing rotation of the section and the spiral thread follower around the rod and  
9 translating the handle and the spiral thread follower along the rod in a first or a second  
10 direction of translation, thereby positioning the handle and the spiral thread follower for  
11 another first step.

1 Claim 5 (withdrawn): A method for reversibly and repeatedly rotating a rotatable load,  
2 comprising:  
3 (a) connecting to the load a rod having spiral convolutions;  
4 (b) mounting on the rod a spiral thread follower having a collar and a handle  
5 rotatably mounted along the spiral thread follower exposing the collar;  
6 (c) selectively engaging the collar to prevent rotation thereof and sliding the  
7 handle along the rod in a first direction of translation or a second, opposite direction of  
8 translation, thereby rotating the rod in a first direction of rotation or a second, opposite  
9 direction of rotation; and  
10 (d) selectively sliding the handle along the rod in the first or second direction  
11 of translation without engaging the collar sufficiently to prevent rotation thereof, thereby  
12 repositioning the handle along the rod in the first or second direction of translation without  
13 rotating the rod.

1 Claim 6 (currently amended): The control rod mechanism of claim 3:  
2 (4) the bottom end of the tube protruding from the lower end of the member; and  
3 (5) a retainer attached to the bottom end of the tube for rotatably capturing the  
4 member between the retainer connector and the collar.